

Claims:

1. A probe having a prescribed thickness and formed in the shape of a flat plate, the probe comprising:

5 a body part bent at the middle thereof so that the body part is elastically tensioned or compressed when a tension force or a compression force is applied to the body part at the upper and lower ends thereof;

a connection part integrally formed with the lower end of the body part, the connection part being fixed to a substrate; and

10 a tip part integrally formed with the upper end of the body part, the tip part contacting a pad of an element.

2. The probe as set forth in claim 1, wherein the body part comprises:

a horizontal section;

15 a first vertical section bent vertically downward from one end of the horizontal section, the first vertical section being integrally connected to the connection part; and

a second vertical section bent vertically upward from the other end of the horizontal section, the second vertical section being integrally connected to the tip part.

3. The probe as set forth in claim 1 or 2, wherein the tip part is formed such
20 that the end of the tip part, contacting the pad of the element, is disposed at the outermost side of the probe in the horizontal direction.

4. The probe as set forth in claim 3, further including an auxiliary probe having a prescribed thickness and formed in the shape of a flat plate, wherein the auxiliary probe comprises: a body part identical to that of the probe; and a connection
25 part identical to that of the probe, and the auxiliary probe is not provided with a tip part identical to that of the probe, the auxiliary probe being fixedly attached to one side of the probe.

5. The probe as set forth in claim 4, wherein the auxiliary probe is further fixedly attached to the other side of the probe.

6. The probe as set forth in claim 1 or 2, further including an auxiliary probe having a prescribed thickness and formed in the shape of a flat plate, wherein the 5 auxiliary probe comprises: a body part identical to that of the probe; and a connection part identical to that of the probe, and the auxiliary probe is not provided with a tip part identical to that of the probe, the auxiliary probe being fixedly attached to one side of the probe.

7. The probe as set forth in claim 6, wherein the auxiliary probe is further 10 fixedly attached to the other side of the probe.

8. A probe card including probes, each of the probes having a prescribed thickness and formed in the shape of a flat plate,

wherein the probe comprises: a body part bent at the middle thereof so that the body part is elastically tensioned or compressed when a tension force or a compression 15 force is applied to the body part at the upper and lower ends thereof; a connection part integrally formed with the lower end of the body part, the connection part being fixed to a substrate; and a tip part integrally formed with the upper end of the body part, the tip part contacting a pad of an element,

wherein the body part comprises: a horizontal section; and a first vertical 20 section bent vertically upward from one end of the horizontal section, the first vertical section being integrally connected to the tip part; a second vertical section bent vertically downward from the other end of the horizontal section, the second vertical section being integrally connected to the connection part,

wherein the lengths of the horizontal section, the first vertical section, and the 25 second vertical section of the body part are changed to form more than two kinds of probes, and

wherein the more than two kinds of probes are fixedly attached on the

substrate of the probe card.

9. A method of making a probe, comprising:

a step 1 for applying a sacrifice layer on the whole upper surface of a silicon wafer, coating the sacrifice layer at the upper surface thereof with a photoresist, and
5 attaching a first mask having a shape pattern of a probe to the upper surface of the photoresist;

a step 2 for exposing and developing the photoresist by means of the first mask, and removing the first mask;

10 a step 3 for performing electrolytic plating on the upper surface of the sacrifice layer having the pattern fixed by means of the exposure and development to form a first metallic film; and

a step 4 for removing the photoresist and etching the sacrifice layer to separate the first metallic film from the silicon wafer.

10. The method as set forth in claim 9, further comprising, between the step 3
15 and the step 4,

a step 3-1 for coating the photoresist and the first metallic film at the upper surfaces thereof with a second photoresist, and attaching a second mask to the upper surface of the second photoresist;

20 a step 3-2 for exposing and developing the second photoresist by means of the second mask, and removing the second mask; and

a step 3-3 for performing electrolytic plating on the upper surface of the first metallic film having the pattern fixed by means of the exposure and development to form a second metallic film.

11. The method as set forth in claim 10, further comprising, between the step
25 3-3 and the step 4,

a step 4-1 for coating the second photoresist and the second metallic film at the upper surfaces thereof with a third photoresist, and attaching a third mask to the upper surface of the third photoresist;

a step 4-2 for exposing and developing the third photoresist by means of the third mask, and removing the third mask; and

a step 4-3 for performing electrolytic plating on the upper surface of the second metallic film having the pattern fixed by means of the exposure and development to 5 form a third metallic film.

12. The method as set forth in claim 9, wherein the first mask has a space part, the space part comprising: a body part bent at the middle thereof; a connection part integrally formed with the lower end of the body part; and a tip part integrally formed with the upper end of the body part.

10 13. The method as set forth in claim 9 or 10,

wherein the first mask has a space part, the space part comprising: a body part bent at the middle thereof; a connection part integrally formed with the lower end of the body part; and a tip part integrally formed with the upper end of the body part, and

15 wherein the second mask has a space part, the space part comprising: a body part bent at the middle thereof; and a connection part integrally formed with the lower end of the body part.

14. The method as set forth in any one of claims 9 to 11,

wherein the first mask has a space part, the space part comprising: a body part bent at the middle thereof; and a connection part integrally formed with the lower end of the body part,

wherein the second mask has a space part, the space part comprising: a body part bent at the middle thereof; a connection part integrally formed with the lower end of the body part; and a tip part integrally formed with the upper end of the body part, and

25 wherein the third mask has a space part, the space part comprising: a body part bent at the middle thereof; and a connection part integrally formed with the lower end of the body part.